

WHAT IS CLAIMED IS:

1. A light emitting device drive circuit for driving
a light emitting device in accordance with an input signal, the
5 circuit comprising:

a current source for generating constant currents each
being supplied to the light emitting device either in a light
emitting state or an extinction state in accordance with an input
signal;

10 the light emitting device to which a current is supplied
by the current source; and

a resistor connected in parallel with the light emitting
device,

wherein the light emitting device emits light and
15 quenches light emission in accordance with a drive current which
is a subtraction of a current supplied to the resistor from the
current supplied by the current source.

2. The light emitting device drive circuit according
20 to claim 1, wherein a value of the resistor is set so as to increase
the drive current supplied to the light emitting device when a
forward voltage of the light emitting device is decreased in
connection with a temperature rise due to light emission, the drive
current being increased by an amount of a current for compensating
25 for an intensity of the light from the light emitting device which

is decreased due to the decrease of the forward voltage.

3. A light emitting device drive circuit for driving
a light emitting device in accordance with an input signal, the
5 circuit comprising:

a current source for generating constant currents each
being supplied to the light emitting device either in a light
emitting state or an extinction state in accordance with an input
signal;

10 the light emitting device to which a current is supplied
by the current source;

a coil connected at one end to an anode of the light
emitting device; and

a resistor connected between the other end of the coil
15 and a cathode of the light emitting device,

wherein the light emitting device emits light and
quenches light emission in accordance with a drive current which
is a subtraction of a current supplied to the coil and the resistor
from the current supplied by the current source.

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4. The light emitting device drive circuit according
to claim 3, wherein values of the coil and the resistor are set
so as to increase the drive current supplied to the light emitting
device during a rising response delay period in a transition from
25 an extinction state of the light emitting device to a light emitting

state, the drive current being increased by an amount for shortening the rising response delay period.

5 5. The light emitting device drive circuit according to claim 4, wherein the values of the coil and the resistor are set so as to increase the drive current supplied to the light emitting device when a forward voltage of the light emitting device is decreased in connection with a temperature rise due to light emission, the drive current being increased by an amount of a current
10 for compensating for an intensity of the light from the light emitting device which is decreased due to the decrease of the forward voltage.

6. A light emitting device drive circuit for driving
15 a light emitting device in accordance with an input signal, the circuit comprising:

 a current source for generating constant currents each being supplied to the light emitting device either in a light emitting state or an extinction state in accordance with an input
20 signal;

 the light emitting device to which a current is supplied by the current source;

 a resistor connected at one end to an anode of the light emitting device; and

25 a coil connected between the other end of the resistor

and a cathode of the light emitting device,

wherein the light emitting device emits light and quenches light emission in accordance with a drive current which is a subtraction of a current supplied to the resistor and the
5 coil from the current supplied by the current source.

7. The light emitting device drive circuit according to claim 6, wherein values of the coil and the resistor are set so as to increase the drive current supplied to the light emitting
10 device during a rising response delay period in a transition from an extinction state of the light emitting device to a light emitting state, the drive current being increased by an amount for shortening the rising response delay period.

15 8. The light emitting device drive circuit according to claim 7, wherein the values of the coil and the resistor are set so as to increase the drive current supplied to the light emitting device when a forward voltage of the light emitting device is decreased in connection with a temperature rise due to light
20 emission, the drive current being increased by an amount of a current for compensating for an intensity of the light from the light emitting device which is decreased due to the decrease of the forward voltage.